SYSTEM AND METHOD FOR PROVIDING DEFECT PRINTABILITY ANALYSIS OF PHOTOLITHOGRAPHIC MASKS WITH JOB-BASED AUTOMATION

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ABSTRACT

Serious defects on a mask can compromise the functionality of the integrated circuits formed on the wafer. Nuisance defects, which do not affect the functionality, waste expensive resources. A defect analysis tool with job-based automation can accurately and efficiently determine defect printability. This tool can run a job, using a mask file, to simulate the wafer exposure that the mask would provide under a given set of parameters. These parameters can relate to the mask itself, the inspection system used to create the mask file, and the stepper that can be used to expose the mask. The processes performed during the job can be done uniformly for defects on the mask. This uniformity allows the tool to efficiently run multiple jobs. The results of the job can be presented using different levels of detail to facilitate user review.